AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

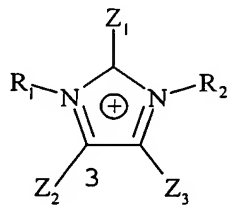
LISTING OF CLAIMS:

1-23 (cancelled)

24.(new) A process for the preparation of an ion-conducting gel in solid form, also designated "ionogel", characterized in that it comprises a stage of mixing an ionic liquid with at least one molecular precursor comprising at least one hydrolyzable group, and if appropriate, in the presence of an acid, such as a carboxylic acid, the mixture then being left to stand for one or more days until a gel is obtained, formed by polycondensation of the molecular precursor(s), containing within it the abovementioned ionic liquid, and capable of being shaped, in particular in the form of transparent monolithic solid.

25.(new) The process of claim 24, characterized in that the ionic liquid is chosen from those comprising as cation an imidazolium or pyridinium nucleus, if appropriate substituted, in particular by one or more alkyl groups with 1 to 4 carbon atoms.

26.(new) The process of claim 24, characterized in that the ionic liquid is chosen from those comprising as cation an imidazolium nucleus of the following formula (I):



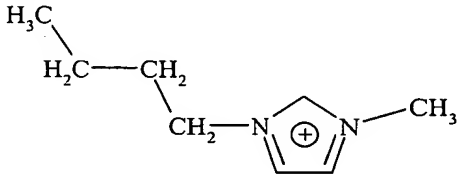
(I)

in which:

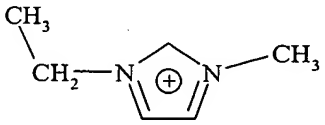
- R_1 and R_2 represent an alkyl group with 1 to 4 carbon atoms, and
- Z_1, Z_2 and Z_3 represent a hydrogen atom or an alkyl group with 1 to 4 carbon atoms.

27. (new) The process of claim 24, characterized in that the ionic liquid is chosen from those comprising as cation:

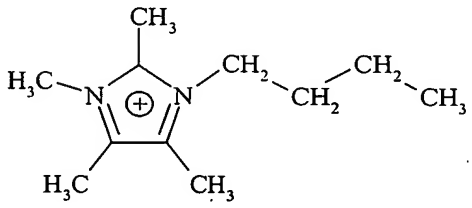
- 1-butyl-3-methylimidazolium of the following formula:



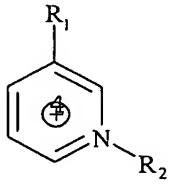
- or 1-ethyl-3-methylimidazolium of the following formula:



- or 1-butyl-2, 3, 4, 5-tetramethylimidazolium of the following formula:



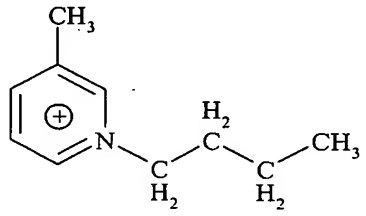
28. (new) The process of claim 24, characterized in that the ionic liquid is chosen from those comprising as cation a pyridinium nucleus of the following formula (II):



(II)

in which R_1 and R_2 represent a hydrogen atom or an alkyl group with 1 to 4 carbon atoms.

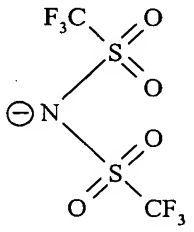
29.(new) The process of claim 24, characterized in that the ionic liquid is chosen from those comprising as cation 1-butyl-3-methylpyridinium of the following formula:



30.(new) The process of claim 24, characterized in that the ionic liquid contains, as anions, those chosen from the halides and perfluorinated anions.

31.(new) The process of claim 24, characterized in that the anion is:

- bis(trifluoromethylsulphonyl)imide of formula:



- hexafluorophosphate of formula PF_6^-.

32.(new) The process of claim 24, characterized in that the ionic liquid is chosen from:

- 1-butyl-3-methylimidazolium bis(trifluoromethylsulphonyl)imide,
- 1-ethyl-3-methylimidazolium bis(trifluoromethylsulphonyl)imide,

- 1-butyl-3-methylimidazolium hexafluorophosphate.

33.(new) The process of claim 24, characterized in that the molecular precursor is chosen from the derivatives of the elements of groups 13, 14 and 15 of the periodic table, or transition metal derivatives.

34.(new) The process of claim 24, characterized in that the molecular precursor is a compound of general formula: $R'_x(RO)_{4-x}Si$

in which:

- x is an integer varying from 0 to 4,
- R represents an alkyl group with 1 to 4 carbon atoms, and
- R' represents:
  * an alkyl group comprising from 1 to 4 carbon atoms, or
  * an aryl group comprising from 6 to 30 carbon atoms, or
  * a halogen atom,

said compound being in particular tetramethoxysilane, methyltrimethoxysilane, phenyltriethoxysilane, or characterized in that the molecular precursor is a mixture of compounds as defined above.

35.(new) The process of claim 24, characterized in that the ionic liquid/molecular precursor molar ratio in the mixture is 1/2.

36.(new) The process of claim 24, characterized in that the carboxylic acid is formic acid.

37.(new) The process of claim 24, characterized in that the molecular precursor/carboxylic acid molar ratio in the mixture is 1/50.

38.(new) The process of claim 24, characterized in that the mixture is left to stand for 7 to 9 days under ambient atmosphere and temperature.

39.(new) The process of claim 24, characterized in that the mixture is aged under ultrasound for 24 hours.

40.(new) The process of claim 24, characterized in that the ionogels obtained have the following characteristics:

- they are monolithic solids,
- they are stable up to temperatures of approximately 350°C,
- they are transparent,
- they are ionic conductors, their ionic conductivity being in particular comprised between approximately 10^{-4} and 10^{-3} $S.cm^{-1}$ at ambient temperature and between 10^{-2} and 10^{-1} at 230°C.

41.(new) Ionogels as obtained by implementation of the process of claim 24, said ionogels comprising an ionic liquid, confined within a continuous solid network formed from at least one molecular precursor.

42.(new) Ionogels as obtained by implementation of the process of claim 24, said ionogels comprising an ionic liquid chosen from the group constituted by: 1-butyl-3-methylimidazolium bis(trifluoromethylsulphonyl)imide, 1-ethyl-3-methylimidazolium bis(trifluoromethylsulphonyl)imide, and 1-butyl-3-methylimidazolium hexafluorophosphate, confined within a

continuous solid network formed from at least one molecular precursor chosen from the derivatives of the elements of groups 13, 14 and 15 of the periodic table, or transition metal derivatives.

43.(new) Ionogels of claim 41, characterized in that they have the following characteristics:

- they are monolithic solids,
- they are stable up to temperatures of approximately 350°C,
- they are transparent,
- they are ionic conductors, their ionic conductivity being in particular comprised between approximately 10^{-4} and 10^{-3} $S.cm^{-1}$ at ambient temperature and between 10^{-2} and 10^{-1} at 230°C.

44.(new) Ionogels of claim 41, characterized by the presence of a continuous solid network.

45.(new) Ionogels of claim 41, characterized in that they have the following mechanical properties:

- a Young's modulus comprised between approximately 50 and approximately 100 MPa, in particular comprised between approximately 52 and approximately 75 MPa, and preferably with an average value equal to approximately 63 MPa, and
- a stress at break comprised between approximately 0.1 and approximately 1.5 MPa, in particular comprised between approximately 0.44 and approximately 1.31 MPa, and preferably with an average value equal to approximately 0.82 MPa.

46.(new) Ionogels of claim 41, characterized in that they are stable in aqueous medium.

47.(new) A method for the preparation of accumulators, fuel cells, photovoltaic cells or electrochrome systems, comprising the use of the ionogels of claim 41 as conducting materials.

48.(new) Separation processes for gases or liquids, or for electrodialysis, comprising the use of the ionogels of claim 41 as membranes.

49.(new) A method of chromatographic analysis, comprising the use of the ionogels of claim 41 as stationary phase.